

Creating Healthy Transportation Infrastructure

For a More Active Population

Arizona Planning Association Conference, 2011

Session Overview

- Ann Chanecka, Pima Association of Governments
- Joseph Perez, City of Phoenix
- Tom Thivener, City of Tucson





's Bicycle & Pedestrian Facilities

by Tom Thivener
Bicycle & Pedestrian
City of Tucson





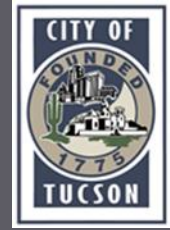
's

Pedestrian Facilities



Refuge Island Crossing

County Courthouse



Pelican Signal

PEdestrian Light
Control Activation



HAWK Beacon

High Intensity Activated
Cross Walk



HAWK Beacon

Sequence



1



2

Flashing



3



4



5

Wig-Wag



Return
to 1



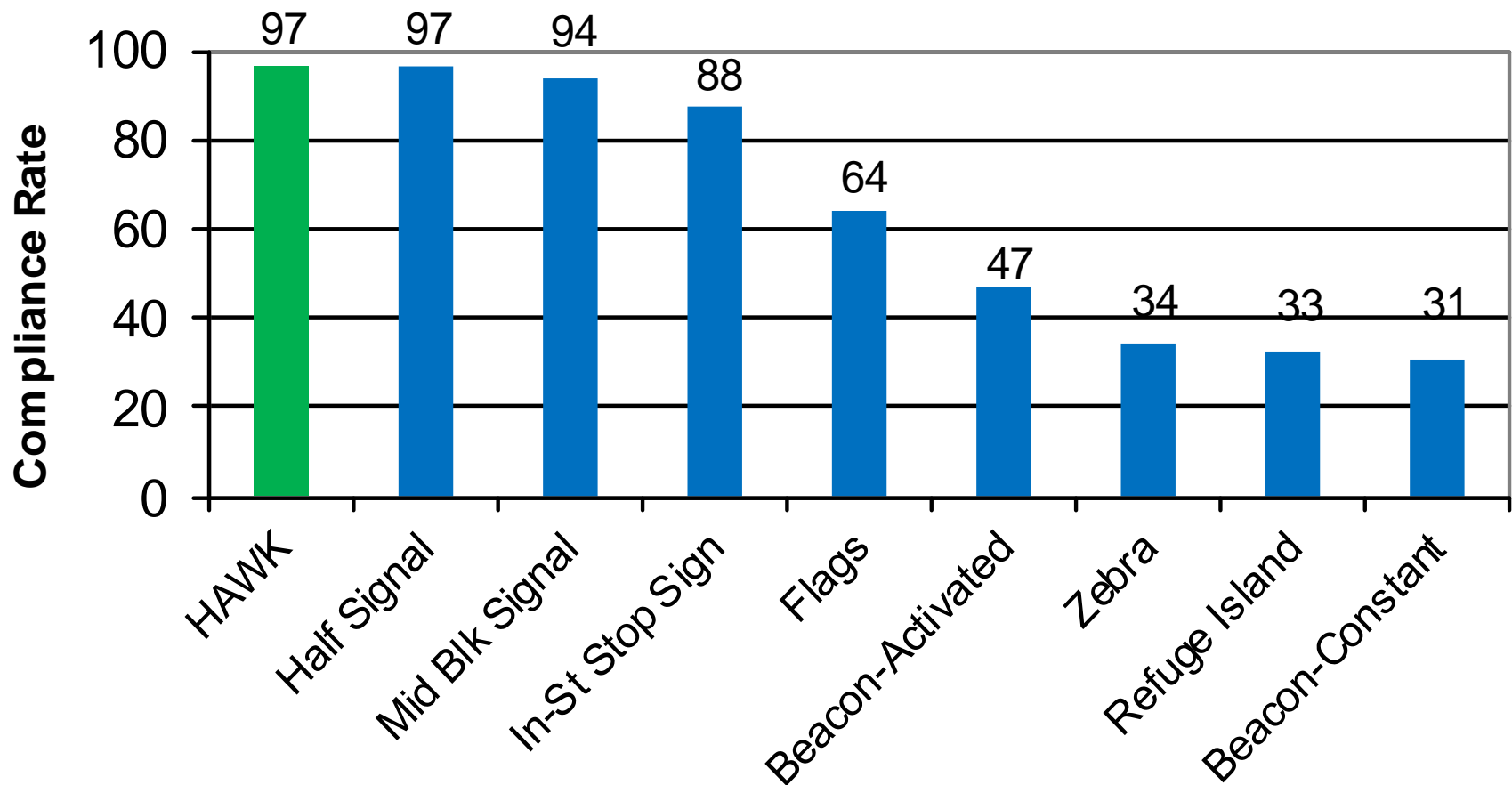
HAWK Beacon

Video



HAWK Beacon

Compared to other
Innovative crossing
treatments

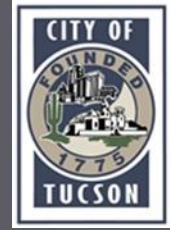


HAWK Beacon's Work

- Adopted into the MUTCD in 2009
- 29% Reduction in crashes at intersections with HAWKS
- 69% Reduction in pedestrian crossing crashes

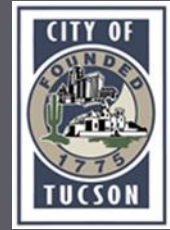
Green Streets

Water Harvesting &
Road Narrowing



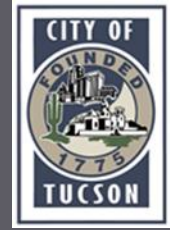
TOUCAN Signal

Two Groups
CAN cross



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Two Groups
CAN cross





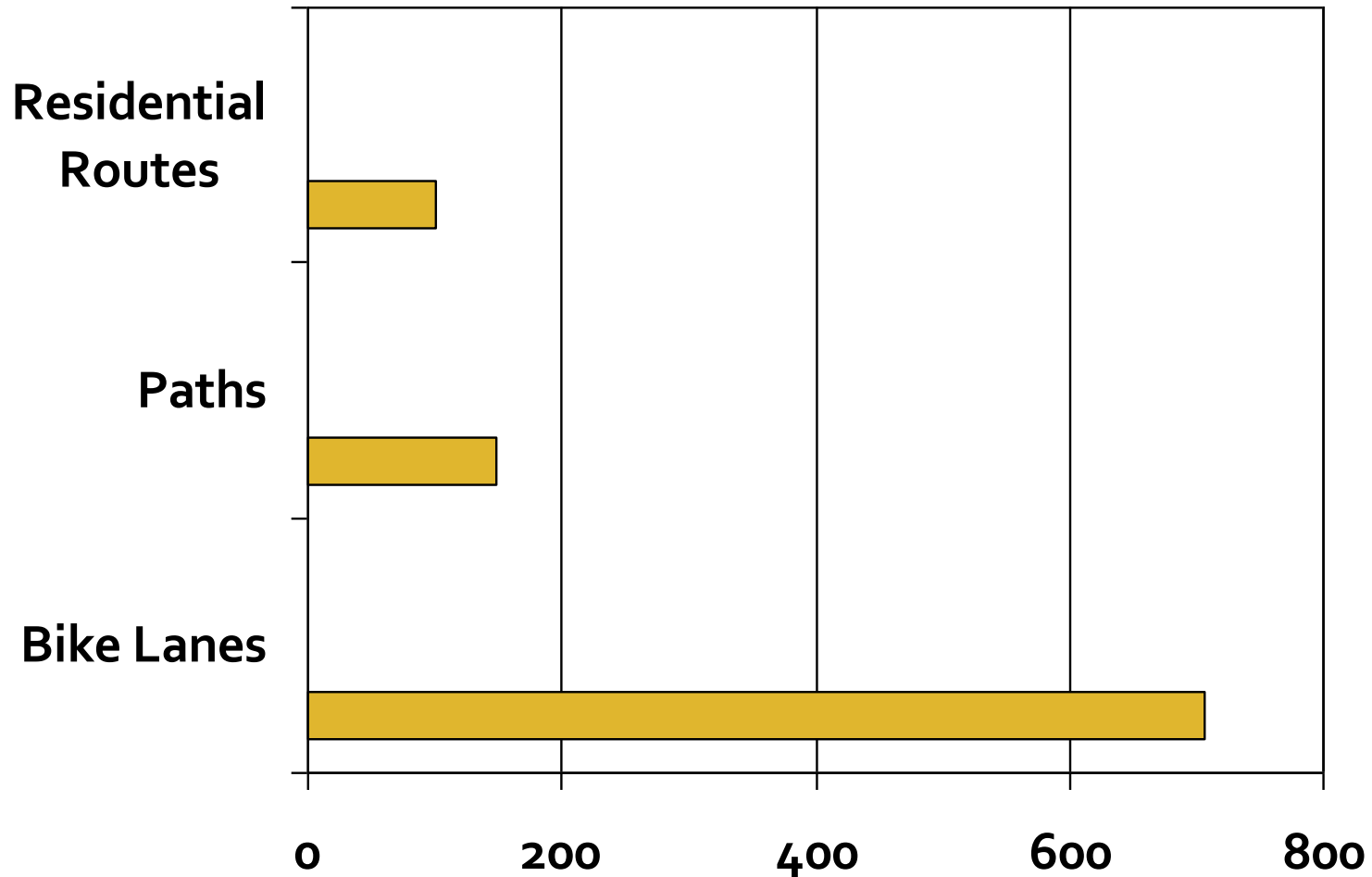
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Bicycle Facilities



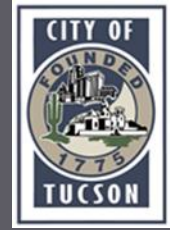
Metro Tucson has over 950 miles of Bikeways

Most are bike lanes on busy roads



Bike Lanes

Over 700 miles in
metro Tucson



Maintenance

Poor Utility
Cut and Fill's



Off-Street Paths

Around 50 miles



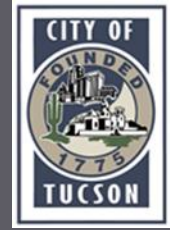
Residential Bikeways

100 miles in
Tucson



Maintenance

Poor Pavement

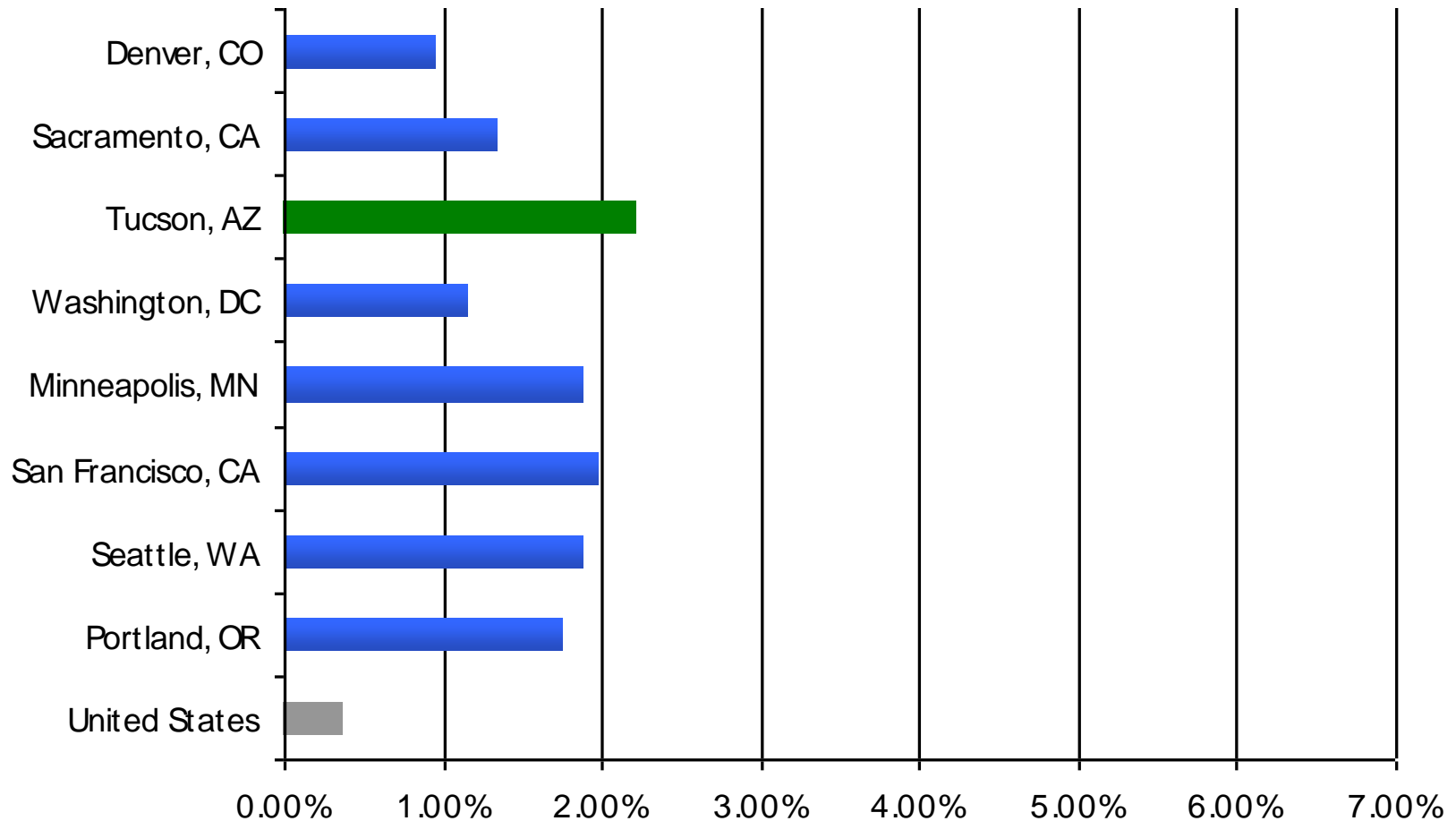


**How do we get more
people to use the bike
for transportation?**



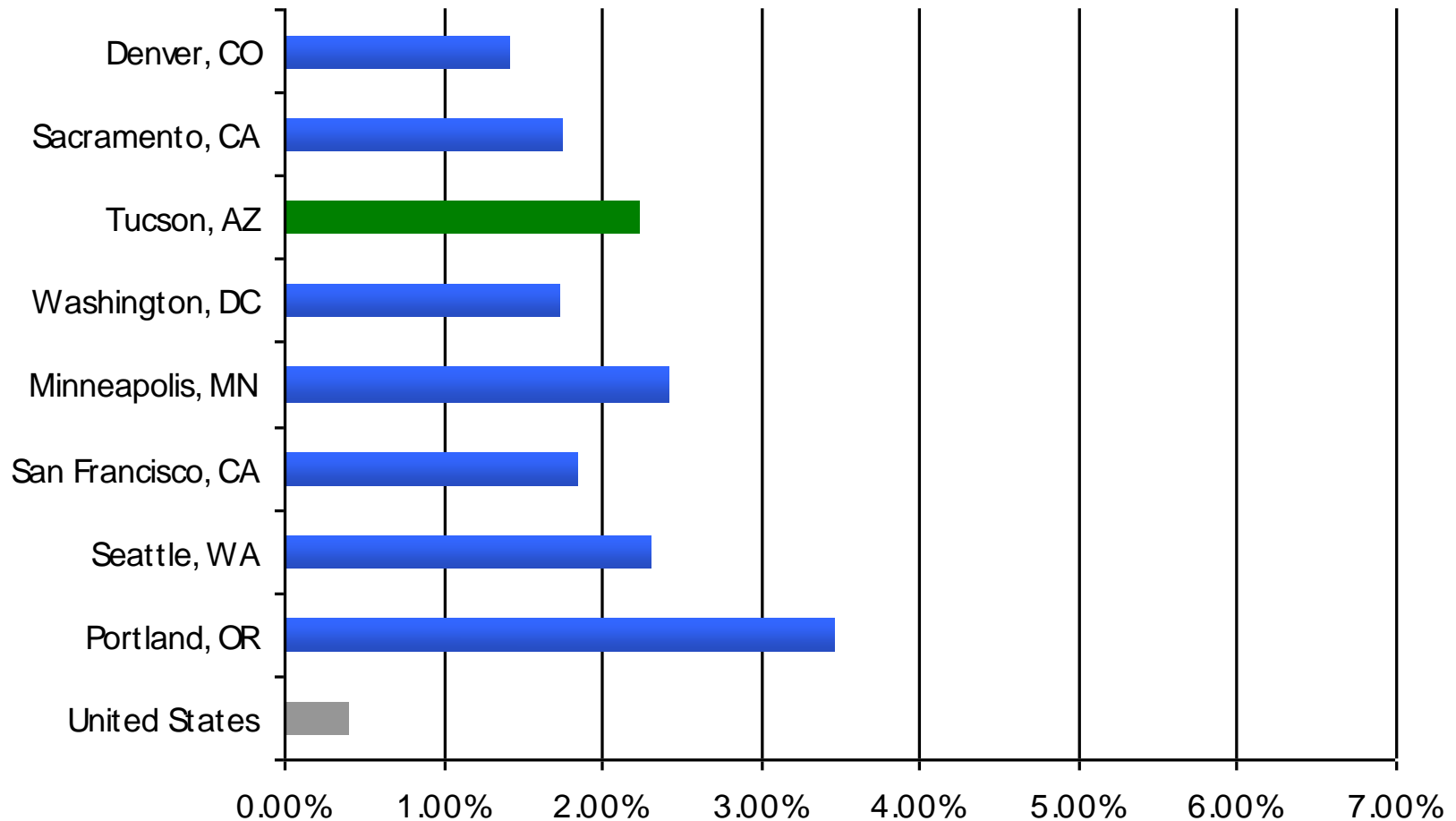
Where Tucson Stands

2000 – BIKE RIDERSHIP IN TOP 8 MAJOR CITIES



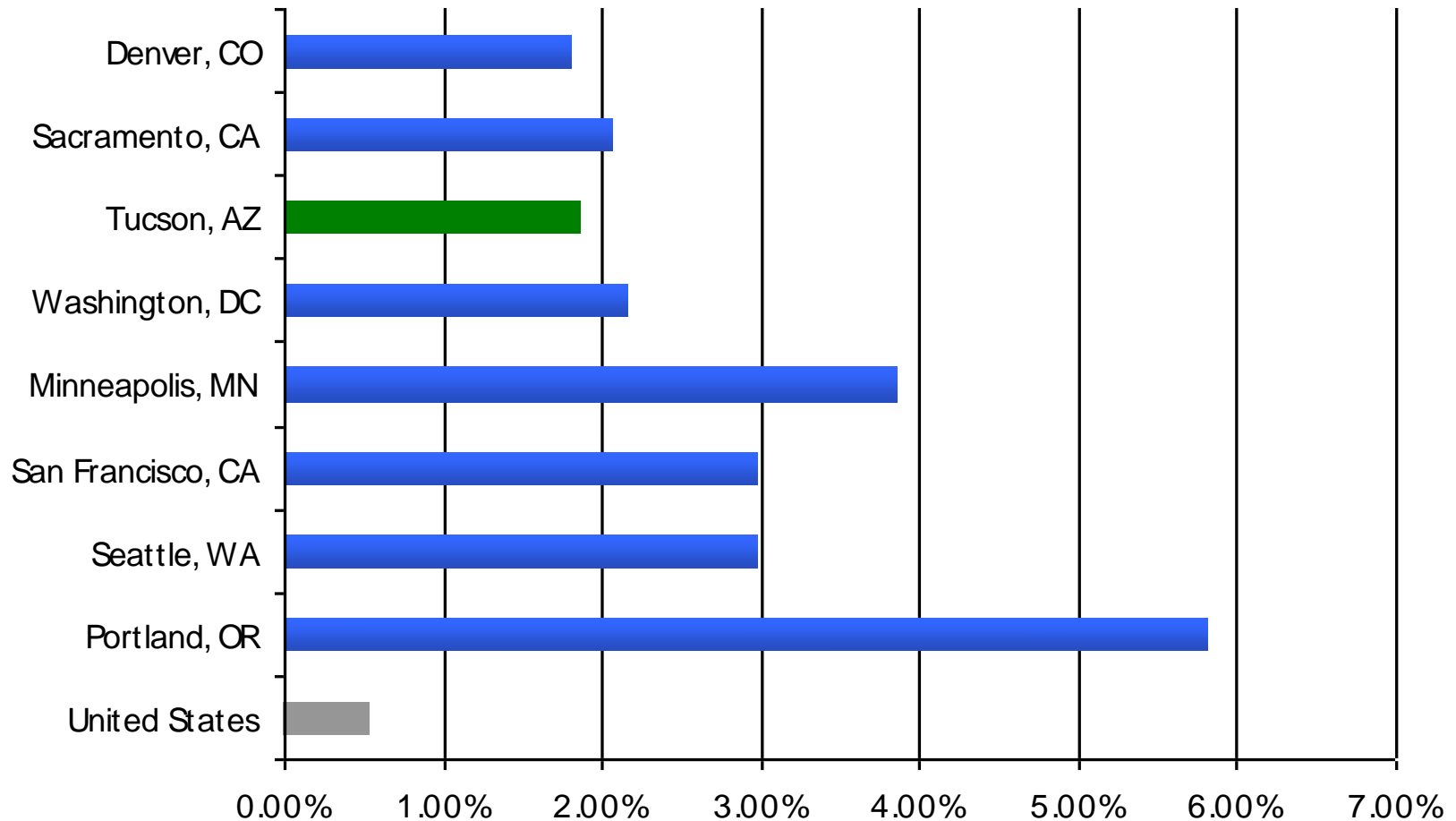
Where Tucson Stands

2005 – BIKE RIDERSHIP IN TOP 8 MAJOR CITIES



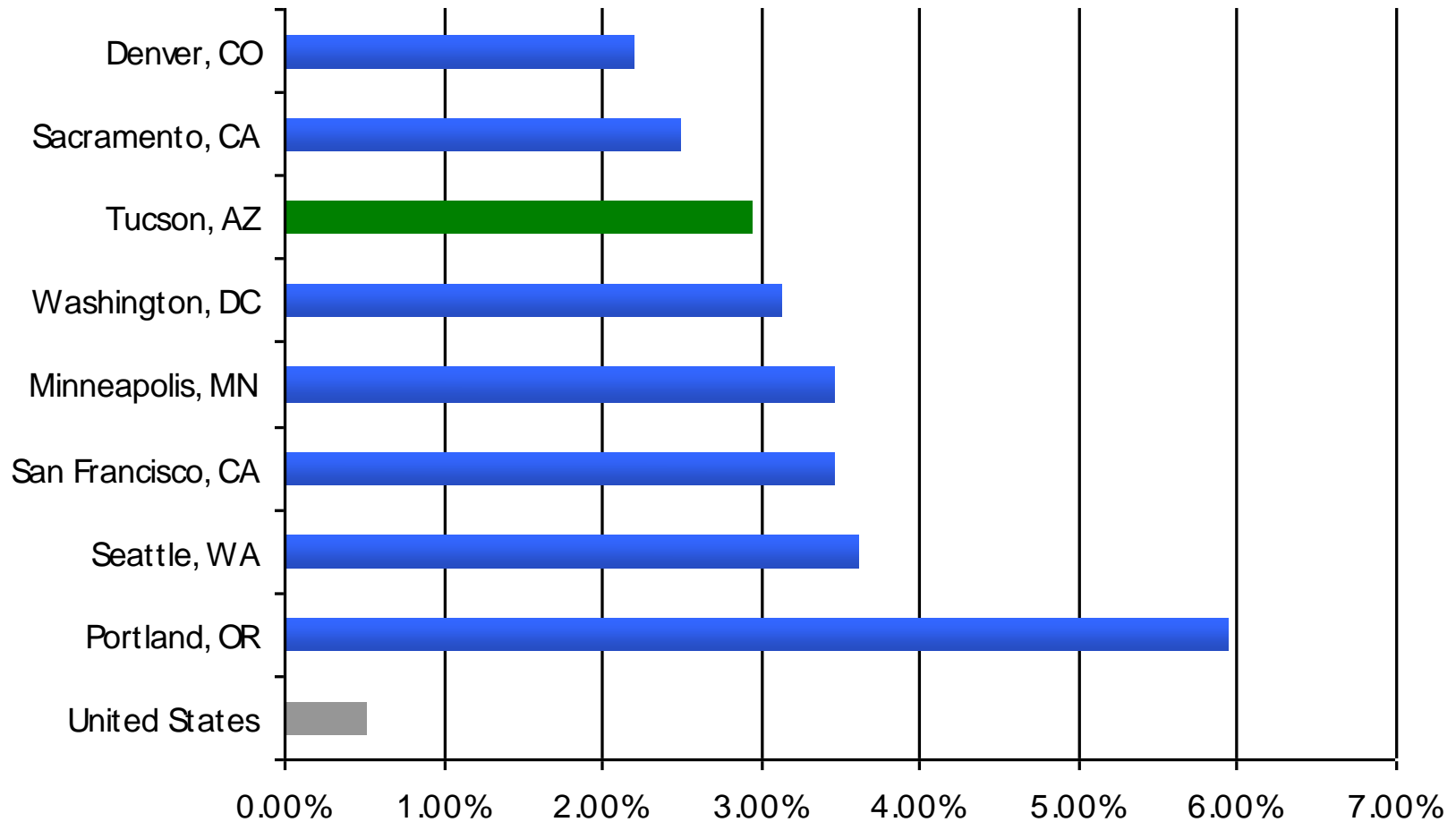
Where Tucson Stands

2009 – BIKE RIDERSHIP IN TOP 8 MAJOR CITIES



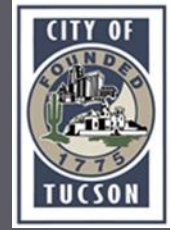
Where Tucson Stands

2010 – BIKE RIDERSHIP IN TOP 8 MAJOR CITIES



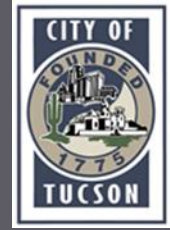
Shared Lanes

“Sharrow” Marking



Buffered Bike Lanes

Paint or
Stamped Asphalt



Buffered Bike Lanes

Paint or
Stamped Asphalt



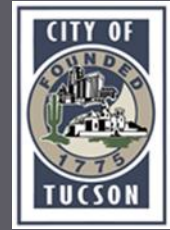
Colored Bike Lanes

Paint or Preformed
Thermoplastic



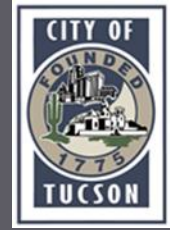
Partial Bike Box

Protect Bikes from
“Right Hook”



Bike Box

Head start for bikes
And more visible
to motorists



Overcoming Barriers to Circulation

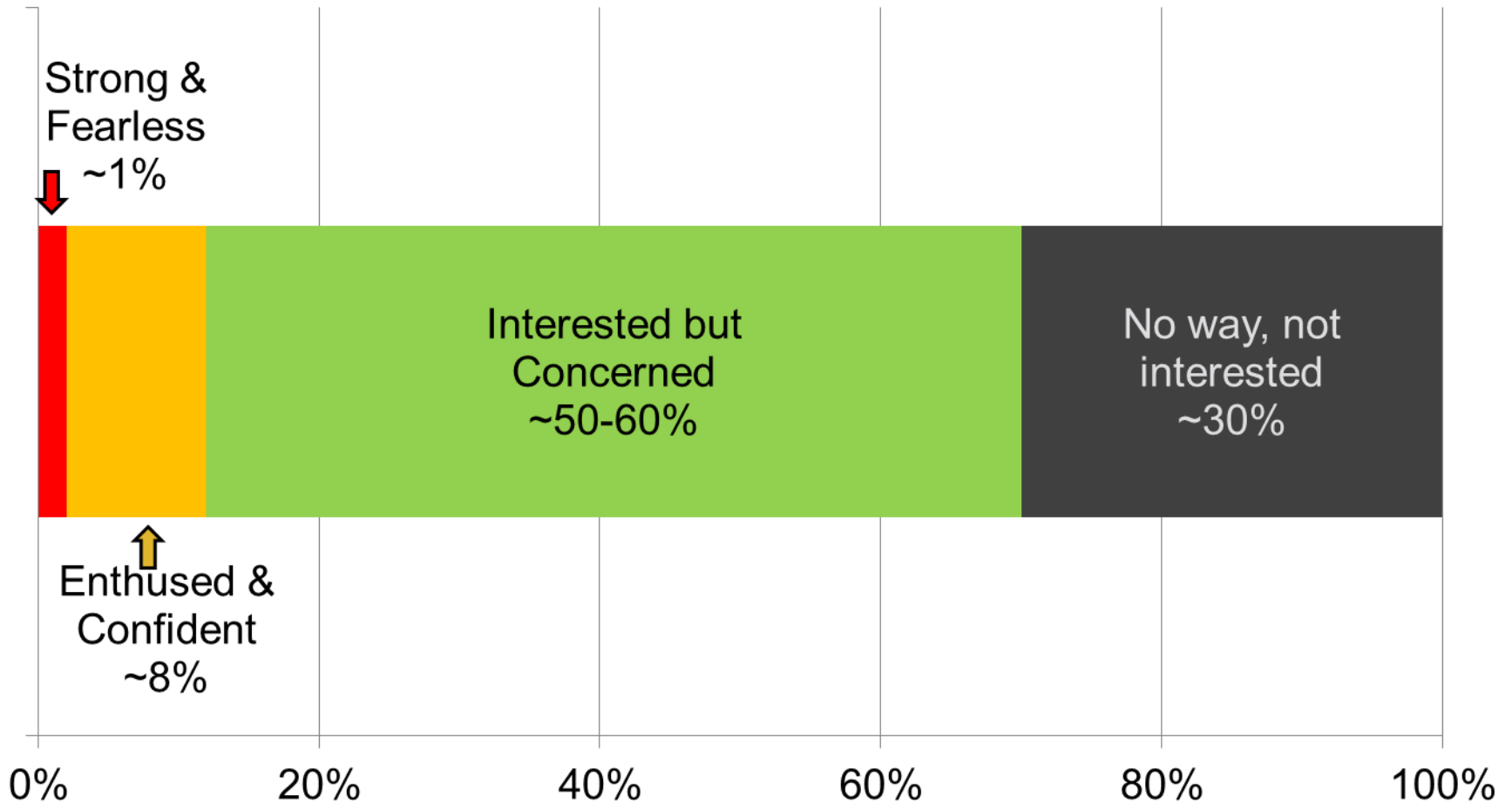


Cut-through's

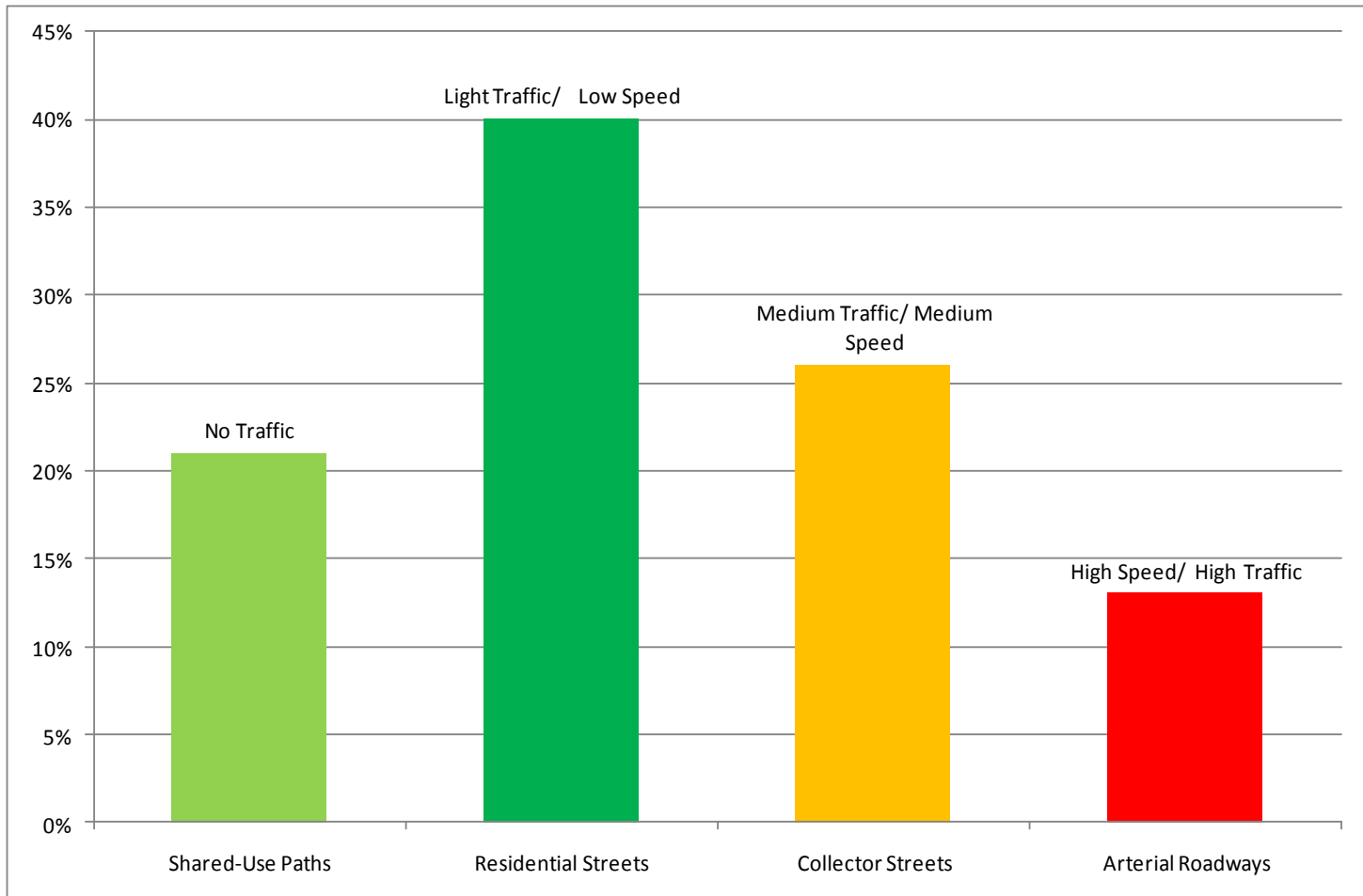
Opening through
Solid island



Understanding Your Potential Market for Bicycling



Understanding Where People Like to Ride



From survey of 210 people at 3rd St and Treat in 2009, Tucson, Arizona

Women –the ‘Indicator Species’

- Women serve as “**indicator species**” for bike friendliness
 - “if a city wants to substantially increase the number of people riding bikes on a regular basis, it needs to reach out to young women and older people”
 - “Women were less likely than men to try on-street bike lanes and more likely to go out of their way to use bike boulevards”
- Holland: 55% of bicyclists are women (bikes used for 27% of trips)
- Germany: 49% of bicyclists are women (bikes used for 12% of trips)
- US: 23% of bicyclists are women (bikes used for 0.5% of trips)

Research from Portland State University and summarized in Scientific American - Oct. 2009

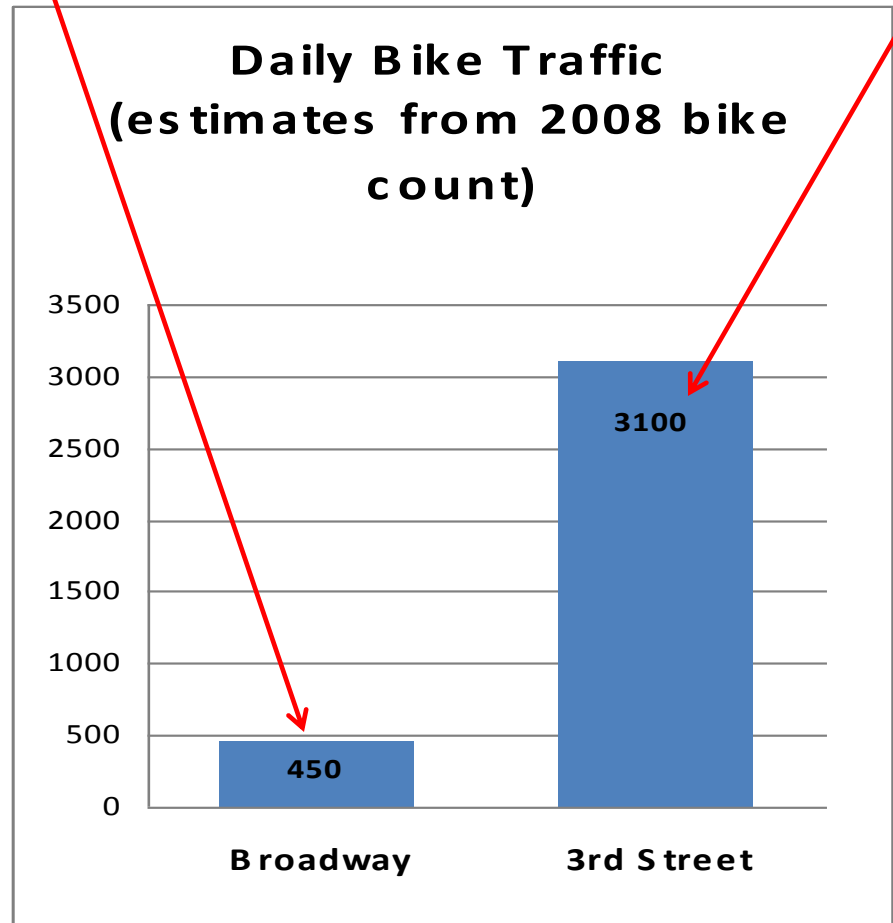


Success from 3rd Street



13% are women

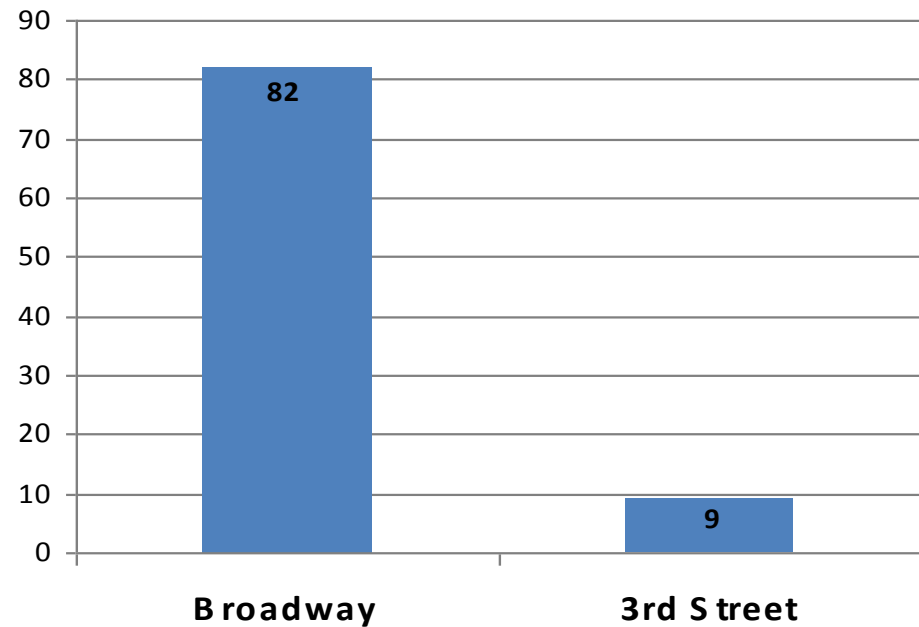
34% are women



Success from 3rd Street

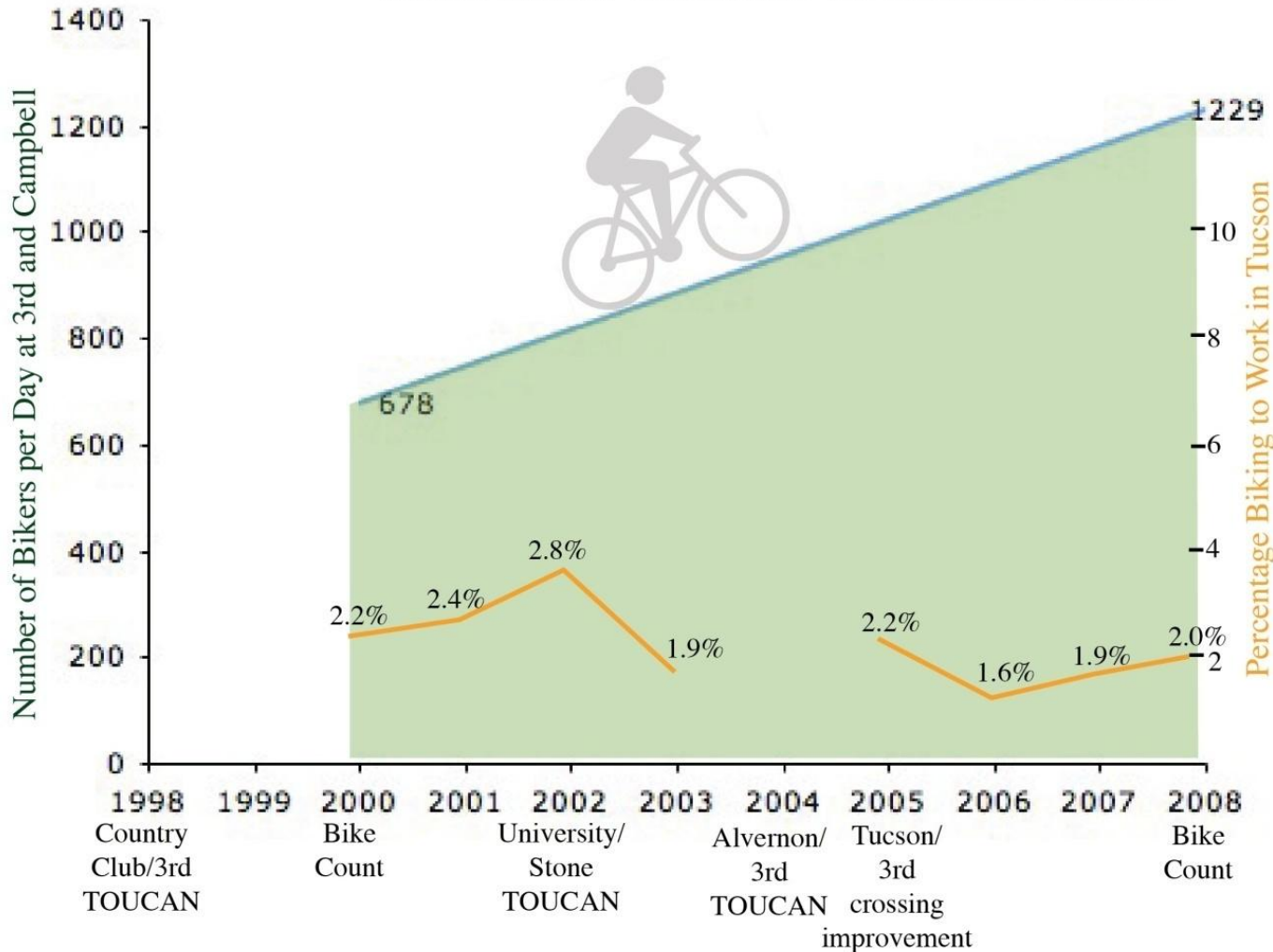


**Number of bike crashes
between Wilmot and Campbell
from 2001 to 2008**



Success from 3rd Street

THIRD STREET RIDERSHIP VS. TUCSON'S TREND



226% increase
in bikes on 3rd
Street at
Campbell
since
TOUCAN
signals have
been installed

Bicycle Boulevards

7 miles in Tucson
and counting!



Interested but Concerned: Bicycle Boulevards

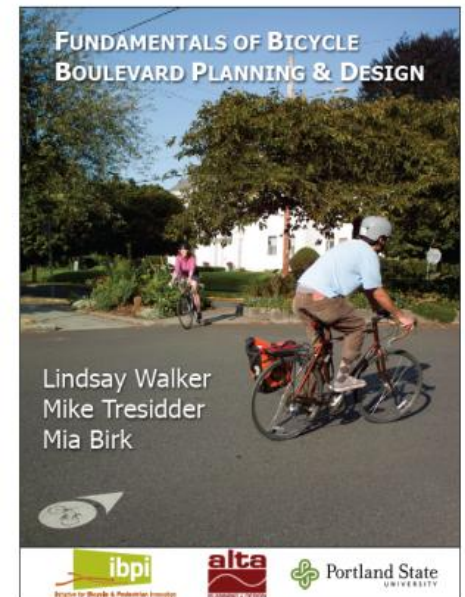
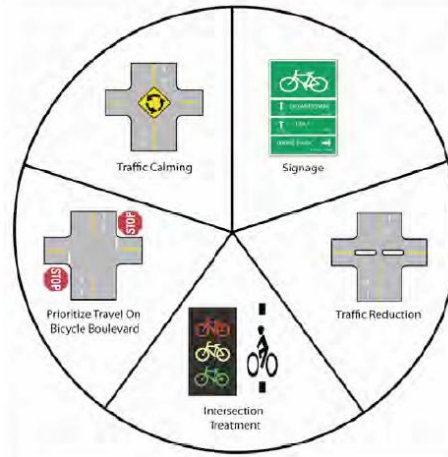
- Shared Roadway
- Takes advantage of grid system on residential streets
- Connections with other bikeways
- Safe and attractive



Interested but Concerned: Bicycle Boulevards

Five main elements:

- Traffic calming
- Traffic reduction
- Signage
- Intersection Treatments
- Prioritized Travel



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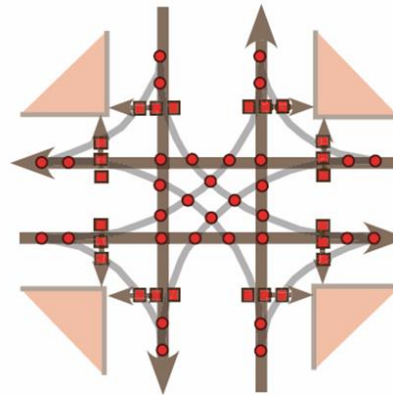
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- Signage
- **Intersection Treatments**
- Prioritized Travel



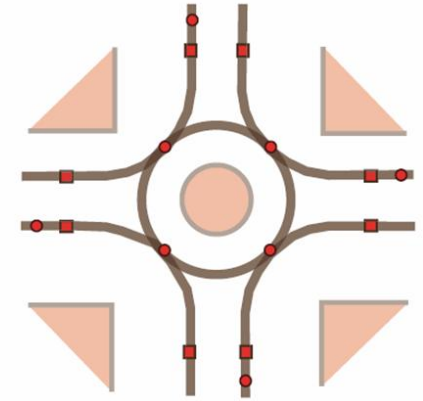
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• Vehicle to Vehicle Conflicts (32)
■ Vehicle to Pedestrian Conflicts (24)



• Vehicle to Vehicle Conflicts (8)
■ Vehicle to Pedestrian Conflicts (8)



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Fontana Ave. / Fort Lowell Rd.



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More than Bricks and Mortar



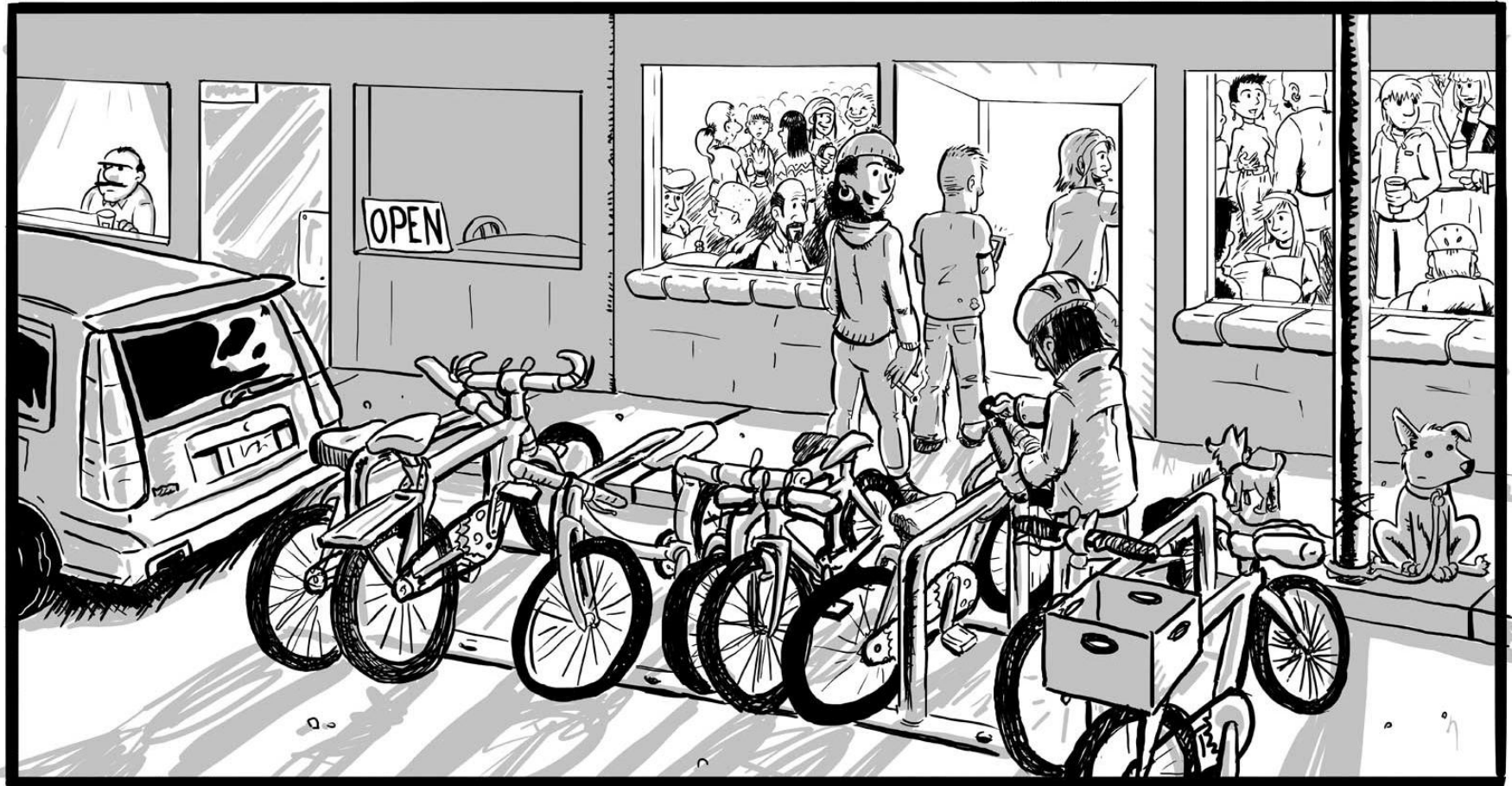
Bike Parking

Follow APBP
Guidelines!



Bike Parking

Think outside the box



HOW'S BUSINESS?

Bike Parking

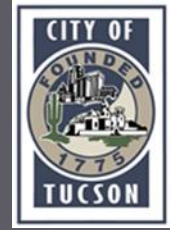
Lost 1 car stall,
Gained parking for
22 bikes



Cyclovia



2010 event attracted
5,000 Tucsonans



Cyclovia

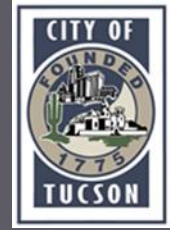


2011 event attracted
10,000 Tucsonans



Programs are vital

Collaboration is key

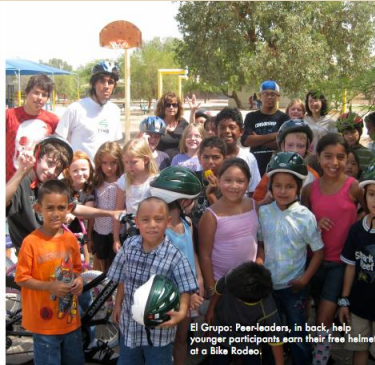


BIKE CLASSES For EVERYONE!

free stuff to all who participate!



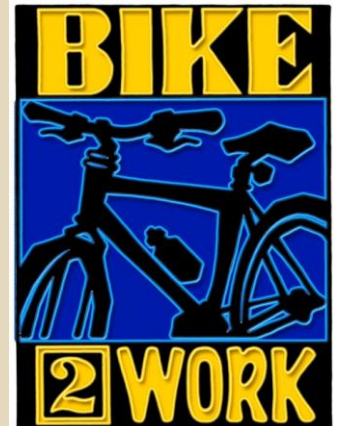
Youth Summer
Bike Camp



Safe Routes
to School

BIKE FEST

APRIL 2010



Other Resources

- This sessions presentations will be available at www.dot.tucsonaz.gov/bicycle
 - Other resources:
 - Association of Bicycle & Pedestrian Professionals
 - www.apbp.org
 - Bicycle Friendly America: “The Blue Print”
 - www.bikeleague.org
 - Alliance for Walking and Biking
 - www.peoplepoweredmovement.org
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